

FIG. 1

FIG. 2

1 gtcgacccacgcgtccgctcaggaccttgaaaggctcaggaagaacaaccctTGAgcacc
 61 tcagcactcagcATGTTCCCTCGCTACGTTCAAGCTGTGTGCTGGAAGCTCCTATAGACAT
 MetPheLeuAlaThrPheLysLeuCysAlaGlySerSerTyrArgHis 16
 121 ATGCGGAATATGAAAGGATTAAGGCACCAAGCTGTGCTGGCCATTGGCCAAGAGCTCAAC
 MetArgAsnMetLysGlyLeuArgHisGlnAlaValLeuAlaIleGlyGlnGluLeuAsn 36
 181 TGGAGAGCACTGGGGGATTCCAGTCCCGGGTGGATGGGTCAAGTTCGACGTCGGAGCTCT
 TrpArgAlaLeuGlyAspSerSerProGlyTrpMetGlyGlnValArgArgArgSerSer 56
 241 CTGCTTGGTTCTCAACTGGAAGCAACACTCTATAGTGACCAGGAGCTGTCTACATCCAG
 LeuLeuGlySerGlnLeuGluAlaThrLeuTyrSerAspGlnGluLeuSerTyrIleGln 76
 301 CAGGGAGAGGTGGCTATGCAGAAGGCCTTGGGCATACTCAACAACCAGGAAGGCTGGAAG
 GlnGlyGluValAlaMetGlnLysAlaLeuGlyIleLeuAsnAsnGlnGluGlyTrpLys 96
 25
 361 AAGGAAAGCCAGCAGGAGAACGGGGACGAAGTGCTAAGTAAGATGGTGCCAGATGTGGGC
 LysGluSerGlnGlnGluAsnGlyAspGluValLeuSerLysMetValProAspValGly 116
 421 AAGGTGTTTCGCTTGGAGGTGGTGGTAGACCAGCCCATGGACAGACTCTATGAAGAACTT
 LysValPheArgLeuGluValValValAspGlnProMetAspArgLeuTyrGluGluLeu 136
 481 GTGGACCGCATGGAGGCCATGGGAGAGTGGAACCCAAATGTCAAGGAGATCAAGGTCCTG
 ValAspArgMetGluAlaMetGlyGluTrpAsnProAsnValLysGluIleLysValLeu 156
 541 CAGAGGATTGGAAGACACGGTCATCACTCATGAGCTGGCTGCGGCGGCAGCAGGCAAC
 GlnArgIleGlyLysAspThrValIleThrHisGluLeuAlaAlaAlaAlaGlyAsn 176
 601 CTGGTGGGGCCTCGAGACTTCGTGAGCGTGCGCTGTACCAAGCGCAGAGGTTCACCTGT
 LeuValGlyProArgAspPheValSerValArgCysThrLysArgArgGlySerThrCys 196
 661 GTGCTGGCAGGCATGGCCACACATTTTGGGGAGATGCCGGAGCAGAGTGGTGTTCATCAGA
 ValLeuAlaGlyMetAlaThrHisPheGlyGluMetProGluGlnSerGlyValIleArg 216
 45
 721 GCTGAACACGGCCCCACCTGCATGGTGTTCATCCACTGGCTGGAAGTCCCTCCAAGACT
 AlaGluHisGlyProThrCysMetValLeuHisProLeuAlaGlySerProSerLysThr 236
 23
 781 AAACCTCACTTGGCTGCTCAGTATTGACCTGAAGGGGTGGCTGCCGAAGACAATCATCAAC
 LysLeuThrTrpLeuLeuSerIleAspLeuLysGlyTrpLeuProLysThrIleIleAsn 256
 841 CAGGTCCTATCGCAGACCCAGATAGAGTTCGCCAACCACCTGCGCAAGCGCCTGGAAGCC
 GlnValLeuSerGlnThrGlnIleGluPheAlaAsnHisLeuArgLysArgLeuGluAla 276
 901 AGCCCTGCCTCTGAGGCCAGTGTTAAggactgtccaccacattgacctgcaaatcattg
 SerProAlaSerGluAlaGlnCysEnd 284
 961 gaagctctcacaggaagcctgcaagtctgtccatcttcagctaacagcatcgaggaggggt
 1021 ggtagtcaggagacactaggactgactggtaaaatcaggatcagcaaaatagaaatgagg
 1081 cttagaataaaaagttctctagtgtctccactgcataagctgtgaaggctaagggataagt
 1141 agctatgaaacctttcatctaggcttgatgatgctgacctaaaagacaccagcagctacg
 1201 aacaggggatgctaaggatcggaactgttgcttaccagctccaaatgtcactacctga
 1261 aggcagtgtgcacacaaagcaaggtcttgcttaggaaactctgtaaaagttctcctctgt
 1321 aaaaggccagaacttgaaactacacaaagggcctttccagagtattccaacttt
 1381 tctctgaggagaaatgaaaccatcattgtgccgacttcctactaatcccatgacAATAA
 1441 AgaacatacatAAAAAAAAAAAAAAAA

FIG. 3

Human steroidogenic acute regulatory protein (StAR) mRNA,

Length = 1605

Identities = 104/134 (77% identity), mouse segment 73-206 to human segment 127-260;

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Mouse:    73 ATGTTCTCGCTACGTTCAAGCTGTGTGCTGGAAGCTCCTATAGACATATGCGGAATATG 132
          ||| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Human:    127 ATGCTGCTAGCGACATTCAAGCTGTGCGCTGGGAGCTCCTACAGACACATGCGCAACATG 186

Mouse:    133 AAAGGATTAAGGCACCAAGCTGTGCTGGCCATTGGCCAAGAGCTCAACTGGAGAGCACTG 192
          || | | | | | | | | | | | | | | | | | | | | | | | | | | |
Human:    187 AAGGGGCTGAGGCAACAGGCTGTGATGGCCATCAGCCAGGAGCTGAACCGGAGGGCCCTG 246

Mouse:    193 GGGGATTCCAGTCC 206
          ||| | | |
Human:    247 GGGGGCCCCACCCC 260
  
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Identities = 612/722 (84% identity); mouse segment 210-931 to human segment 267-988;

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Mouse:    210 GTGGATGGGTCAAGTTCGACGTCGGAGCTCTCTGCTTGGTTCTCAACTGGAAGCAACACT 269
          ||||| | | | | | | | | | | | | | | | | | | | | | |
Human:    267 GTGGATTAACCAGGTTTCGGCGGCGGAGCTCTCTACTCGGTTCTCGGCTGGAAGAGACTCT 326

Mouse:    270 CTATAGTGACCAGGAGCTGTCCTACATCCAGCAGGGAGAGGTGGCTATGCAGAAGGCCTT 329
          ||| ||||| | | | | | | | | | | | | | | | | | | | | |
Human:    327 CTACAGTGACCAGGAGCTGGCCTATCTCCAGCAGGGGGAGGAGGCCATGCAGAAGGCCTT 386

Mouse:    330 GGGCATACTCAACAACCAGGAAGGCTGGAAGAAGGAAAGCCAGCAGGAGAACGGGGACGA 389
          ||||| | | | | | | | | | | | | | | | | | | | | |
Human:    387 GGGCATCCTTAGCAACCAAGAGGGCTGGAAGAAGGAGAGTCAGCAGGACAATGGGGACAA 446

Mouse:    390 AGTGCTAAGTAAGATGGTGCCAGATGTGGGCAAGGTGTTTCGCTTGGAGGTGGTGGTAGA 449
          |||| | | | | | | | | | | | | | | | | | | | | | |
Human:    447 AGTGATGAGTAAAGTGGTCCCAGATGTGGGCAAGGTGTTCCGGCTGGAGGTCTGTGGTGA 506

Mouse:    450 CCAGCCCATGGACAGACTCTATGAAGAACTGTGGACCGCATGGAGGCCATGGGAGAGTG 509
          ||||| | | | | | | | | | | | | | | | | | | | | |
Human:    507 CCAGCCCATGGAGAGGCTCTATGAAGAGCTCGTGGAGCGCATGGAAGCAATGGGGGAGTG 566

Mouse:    510 GAACCCAAATGTCAAGGAGATCAAGGTCCTGCAGAGGATTGGAAGACACGGTCATCAC 569
          ||||| ||||| | | | | | | | | | | | | | | | | | |
Human:    567 GAACCCCAATGTCAAGGAGATCAAGGTCCTGCAGAAGATCGGAAAAGATACATTATTAC 626
  
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Mouse:      970  ACAGGAAGCCTGCAAGTCT  988
              || |||||
Human:     1051  ACTGGAAGCCTGCAAGTCT  1069

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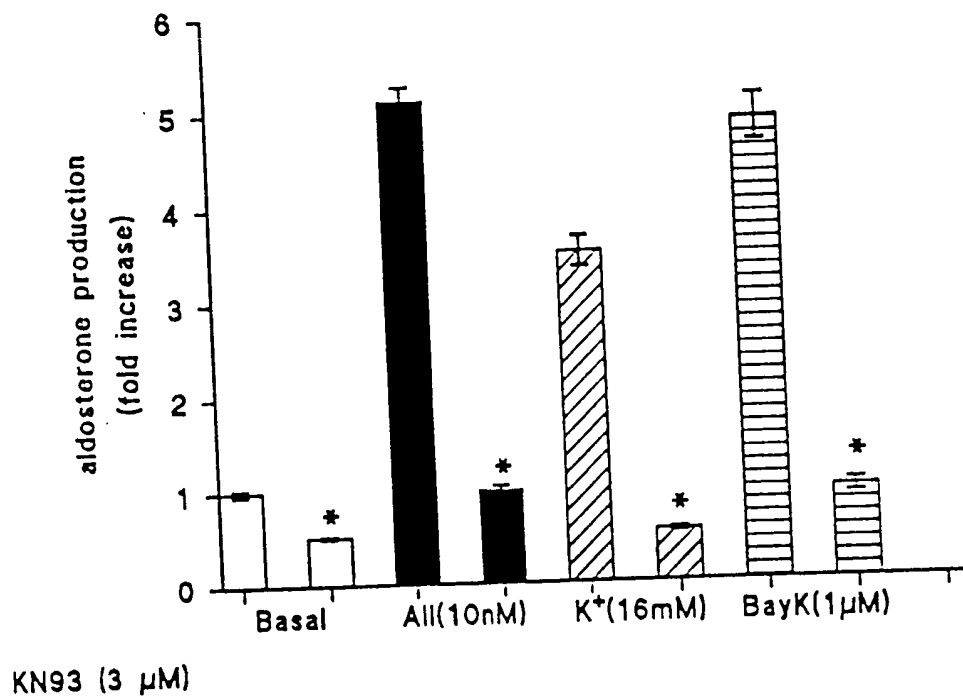


FIG. 4

					C1	C2	
Bovine	1	MLLATFKLCA	GSSYRHvRsM	KGLqQQAVLA	IGQELNRRAL	GGPaPaaWIN	50
Human		MLLATFKLCA	GSSYRHMRNM	KGLRQQAVMA	IsQELNRRAL	GGPtPstWIN	
Mouse		MFLATFKLCA	GSSYRHMRNM	KGLRhQAVLA	IGQELNWRAL	GdssPg.Wmg	
Ovine		.....	.....	.....	.....	.....
Consensus		MLLATFKLCA	GSSYRHMRNM	KGLRQQAVLA	IGQELNRRAL	GGP-P--WIN	
		A	CK				
Bovine	51	QVRRRgSLLG	SQLEDpLYSD	QELAhIQQGE	EAMQrALGIL	kdQEGWKKEs	100
Human		QVRRRSLLG	SrLEETLYSD	QELAYlQQGE	EAMQKALGIL	sNQEGWKKEs	
Mouse		QVRRRSLLG	SQLEaTLYSD	QELsYIQQGE	vAMQKALGIL	nNQEGWKKEs	
Ovine		.....	.....	.....	.....	.....KKEs	
Consensus		QVRRRSLLG	SQLE-TLYSD	QELAYIQQGE	EAMQKALGIL	-NQEGWKKEs	
Bovine	101	rQaNGDEVLS	KVIPDVGVKF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPN	150
Human		qQdNGDkVMS	KVVPDVGVKF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPN	
Mouse		qQeNGDEVLS	KmVPDVGVKF	RLEVVDQPM	DRLYEELVDR	MEAMGEWNPN	
Ovine		rQaNGDEVLS	KVIPDVGVKF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPNs	
Consensus		-Q-NGDEVLS	KV-PDVGVKF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPN	
					A		
Bovine	151	VKEIKVLQKI	GKDTVITHEL	AAEvAGNLVG	PRDFVSVRCT	KRRGSmCVLA	200
Human		VKEIKVLQKI	GKDTfITHEL	AAEAAGNLVG	PRDFVSVRCa	KRRGStCVLA	
Mouse		VKEIKVLQrI	GKDTVITHEL	AAaAAGNLVG	PRDFVSVRCT	KRRGStCVLA	
Ovine		VKEIKVLQKI	GKDTIITHEL	AAEAAGNLVG	PRDFVrVRCT	KRRGSmCVLA	
Consensus		VKEIKVLQKI	GKDTVITHEL	AAEAAGNLVG	PRDFVSVRCT	KRRGS-CVLA	
					CD	C	
Bovine	201	GMATLYeEMP	qQKGVIRAEH	GPTCMVLrPL	AGSPSrTKLT	WLLSIDLKGW	250
Human		GMDtdFgnMP	eQKGVIRAEH	GPTCMVLHPL	AGSPSKTKLT	WLLSIDLKGW	
Mouse		GMATHFgEMP	eQsGVIRAEH	GPTCMVLHPL	AGSPSKTKLT	WLLSIDLKGW	
Ovine		GtATLYeEMP	qQKGVIR...	.....	.....	.....
Consensus		GMATL--EMP	-QKGVIRAEH	GPTCMVLHPL	AGSPSKTKLT	WLLSIDLKGW	
Bovine	251	LPKTIINQVL	SQTQVDFANH	LRKRLEScPA	1EARC	285	
Human		LPKsIINQVL	SQTQVDFANH	LRKRLEShPA	SEARC		
Mouse		LPKTIINQVL	SQTQIEFANH	LRKRLEasPA	SEAqC		
Ovine		.....	.....	.....	.....
Consensus		LPKTIINQVL	SQTQVDFANH	LRKRLES-PA	SEARC		

FIG. 5